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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,617	03/20/2001	Charles-Guillaume Blanchon	109000	1479

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EXAMINER

SHIPSIDES, GEOFFREY P

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 12/30/2002

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,617

Applicant(s)

BLANCHON, CHARLES-
GUILLAUME0

Examiner

Geoffrey P. Shippides

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 5, 7, 11, 15-18, 20, 22-24, 26, 27, 35, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent No. JP 05154868 A (Momotome).

Momotome teaches a molding method where “a preheated laminated sheet 23 is carried between a cavity 21 and core 25, the cavity 21 is raised and the laminated sheet 23 is pressed into the cavity 21 by the core 25. Then after the laminated sheet 23 is held by placing between a cavity side pressing part 22 and core side pressing part 26, the laminated sheet 23 is vacuum-drawn and the laminated sheet 23 is stuck close to the inside 21a of the cavity. The cavity 21 is raised after that, the fringe part of the laminated sheet 23 is cut off by a cutting part 27 and a vessel- like blank 17 is obtained. Then the core 25 and core side pressing part 26 are raised a little, synthetic resin 18 is injected into an injection space 19 between the cavity 21 and the core 25 and a vessel main body 14 is completed.” (Constitution). It is further the examiner’s position that the laminated sheet 23 constitutes a drapable material. It is further noted that when the mold halves are closing in the process of Momotome that the laminated sheet is at some point placed onto the lower mold. It is further noted that pusher 25 of the upper

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mold is movable with respect to the upper mold part 27. It is further noted that the pressing of the laminated sheet constitutes a compacting of the sheet. It is further noted that the process of Momotome inherently includes a step of unloading the part. Part 27 is provide on the cursor and constitutes a blade. It is further noted that the laminated sheet and the injection molded synthetic resin are both inherently made of a thermoplastic material.

3. Claims 1, 2, 4, 11, 17, 18, 20, 22, 23, 27, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,800,759 (Yamazaki et al.).

Yamazaki et al. teaches a method and apparatus for insert-molded articles (abstract). Yamazaki et al. teaches a mold that includes a lower part (12), an upper part (11) with a pusher (110) that is movable with respect to the upper part (11), that has trimming blades (21) that trim the insert upon the closing of the mold (Figures 6A-6C). The pusher (110) pushes at substantially the center of the insert. It is further the examiners position that the insert is a thermoplastic material and is of drapable material. It is further the examiner's position that the insert is inherently at some point in the process placed on the lower mold. It is further the examiner's position that upon the lowering of the pusher that the insert is inherently compacted (to some degree). Yamazaki et al. also teaches the demolding of formed parts (Figures 4 and 5).

4. Claims 1-4, 7, 8, 11, 13, 17, 18, 20-23, 26, 27, 31-32, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,182,787 (King et al.).

King et al. teaches a process for producing multilayered articles (abstract) where a thermoplastic film is placed over the cavity of a first mold part (Figure 1). Then a

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molding core of a second mold part is pressed against the central portion of the thermoplastic film followed by the closure of the remaining parts of the second mold around the first pressed core. The periphery of the first mold includes a recess that corresponds with a cutting blade positioned on the second mold so that the thermoplastic film is trimmed upon the closing of the mold. King et al. also teaches for the injection of polymer into the mould cavity once the excess film is trimmed (abstract). It is further inherent in the process of King et al. that the finished product is demolded. It is the examiner's position that the thermoplastic film as taught by King et al. constitutes a drapable material. It is further the examiner's position that the process of pressing the film into the first mold inherently compacts the film to some degree. It is further the examiner's position that the remaining sections of the mold (other than the core) constitutes a second pusher that is progressively pushed into the first mold part after the core is pressed into the first mold part.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent No. JP 05154868 A (Momotome) in view of Japanese Patent No. JP 01141719 A (Yamamoto et al.).

Momotome as discussed above applies herein.

With regard to claims 33 and 34, Momotome does not specifically teach the pre-trimming of the sheet in the mold so that the thermoformed part is still connected to the sheet by small bridges. It is, however, notoriously well known in the art to perforations in between thermoformed parts in order to allow for easy later separation. It is also well known to thermoform a single sheet into multiple articles that are separated at a later point in time. Yamamoto et al. teaches the perforation along separation lines in such thermoformed objects (Figures). It would have been obvious to one having ordinary skill in the art at the time of invention to modify the process of Momotome to make the cutting apparatus only perforate the laminated sheet between sets of molded objects in order to allow for easy later separation. It is further noted that a perforation is provide (as opposed to instant separation) in order to allow for easier intermediate handling steps and it would have been obvious to one having ordinary skill in the art at the time of invention modify Momotome to mold multiple parts out of a single sheet and to perforate the separation lines between each part as taught by Yamamoto et al in order to allow for easy intermediate handling before separation and easy separation.

7. Claims 6, 14, 19, 25, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent No. JP 05154868 A (Momotome) in view of U.S. Patent No. 4,545,105 (Kowalsky) and U.S. Patent No. 6,328,549 (Valyi et al).

Momotome teaches a molding method where "a preheated laminated sheet 23 is carried between a cavity 21 and core 25, the cavity 21 is raised and the laminated sheet 23 is pressed into the cavity 21 by the core 25. Then after the laminated sheet 23 is

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held by placing between a cavity side pressing part 22 and core side pressing part 26, the laminated sheet 23 is vacuum-drawn and the laminated sheet 23 is stuck close to the inside 21a of the cavity. The cavity 21 is raised after that, the fringe part of the laminated sheet 23 is cut off by a cutting part 27 and a vessel- like blank 17 is obtained. Then the core 25 and core side pressing part 26 are raised a little, synthetic resin 18 is injected into an injection space 19 between the cavity 21 and the core 25 and a vessel main body 14 is completed.” (Constitution). It is further the examiner’s position that the laminated sheet 23 constitutes a drapable material. It is further noted that when the mold halves are closing in the process of Momotome that the laminated sheet is at some point placed onto the lower mold. It is further noted that pusher 25 of the upper mold is movable with respect to the upper mold part 27. It is further noted that the pressing of the laminated sheet constitutes a compacting of the sheet. It is further noted that the process of Momotome inherently includes a step of unloading the part. Part 27 is provide on the cursor and constitutes a blade. It is further noted that the laminated sheet and the injection molded synthetic resin are both intrinsically made of a thermoplastic material.

With regard to claims 6 and 25, Although Momotome teaches the injection of the backing material onto the formed laminated sheet, it is also well known to form the same structure by thermoforming sheets with backing layers already layered on top of the sheet. Valyi et al. and Kowalsky both teach process where material is layered on top of a sheeting material. Valyi et al. teaches the extrusion of material onto the sheet (Figures). It would have been obvious to one having ordinary skill in the art at the time

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of invention to modify the process of Momotome by providing the backing material on the back of the laminated sheet prior to the compression thermoforming of the sheet in order to form a finished article as is taught by Valyi et al. and Kowalsky.

With regard to claims 9, 14, and 28, Momotome does not specifically teach the use of polypropylene as the laminated sheet. Polypropylene is a notoriously well-known molding material. Kowalsky teaches the use of polypropylene as a molding material (Columns 5 & 6) in the molding of an automobile bumper. It would have been obvious to one having ordinary skill in the art at the time of invention to use the process of Momotome to produce a automobile bumper (with a structure as taught by Kowalsky) out of the materials as taught by Kowalsky.

8. Claims 3, 9, 10, 12, 14, 21, 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent No. JP 05154868 A (Momotome) in view of U.S. Patent No. 3,115,678 (Keen et al.), U.S. Patent No. 4,961,700 (Dunbar), and U.S. Patent No. 5,188,787 (King et al.).

Momotome teaches a molding method where "a preheated laminated sheet 23 is carried between a cavity 21 and core 25, the cavity 21 is raised and the laminated sheet 23 is pressed into the cavity 21 by the core 25. Then after the laminated sheet 23 is held by placing between a cavity side pressing part 22 and core side pressing part 26, the laminated sheet 23 is vacuum-drawn and the laminated sheet 23 is stuck close to the inside 21a of the cavity. The cavity 21 is raised after that, the fringe part of the laminated sheet 23 is cut off by a cutting part 27 and a vessel-like blank 17 is obtained. Then the core 25 and core side pressing part 26 are raised a little, synthetic resin 18 is

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injected into an injection space 19 between the cavity 21 and the core 25 and a vessel main body 14 is completed." (Constitution). It is further the examiner's position that the laminated sheet 23 constitutes a drapable material. It is further noted that when the mold halves are closing in the process of Momotome that the laminated sheet is at some point placed onto the lower mold. It is further noted that pusher 25 of the upper mold is movable with respect to the upper mold part 27. It is further noted that the pressing of the laminated sheet constitutes a compacting of the sheet. It is further noted that the process of Momotome inherently includes a step of unloading the part. Part 27 is provide on the cursor and constitutes a blade. It is further noted that the laminated sheet and the injection molded synthetic resin are both intrinsically made of a thermoplastic material.

With regard to claims 3 and 21, Momotome does not teach the inclusion of multiple pushers, but the use of a single pusher.

Keen et al. teaches a process of forming a drapable material (plastic carpet) by the use of an apparatus that uses multiple pushers (Figures). Keen et al. teaches that the method includes the steps of placing carpet having a hot thermoplastic backing across a lower mold (without draping the carpet into the wells of the mold) and then lowering thereupon a multi-section male mold. The arrangement is such that mating engagement is made progressively and successively with the lower mold by different sections of the male mold (Column 1, lines 18-26). It is clear form the teachings of Keen et al. that the use of multiple male mold pusher parts progressively used prevents the bunching up of the inserted carpet. It would have been obvious to one having

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ordinary skill in the art at the time of invention that the method and apparatus of Keen et al. could and would be used for other materials in other processes in order to ensure that a compression thermoformed insert is properly conformed to desired dimensions.

Dunbar teaches a method and apparatus for molding fiber-reinforced articles (Abstract, lines 1-2) particularly suitable for the production of automobile bumpers (Abstract, lines 12-13). The mold as taught by Dunbar includes first and second mold portions (Figures 2-4). The process includes placing a sheet between the mold portions (Figure 2), pressing the sheet against the first portion in the middle of the sheet by a pusher on the second portion that is movable relative to the second mold portion (Figure 3), followed by the closing of the remainder of the mold (Figure 4) to conform the sheet (reinforcement blanket) to the shape of the mold portions (preform screens). Dunbar teaches that the mold portions are held together by a clamping device (Column 4, lines 15-20), this constitutes the compacting of the sheet. Dunbar also teaches the removal of the formed sheet after the curing of the sheet in the mold (Column 4, line 48). Dunbar teaches the use of this method to produce a car parts (automobile bumpers) that include setbacks.

King et al. teaches a similar process for producing multilayered articles (abstract) where a thermoplastic film is placed over the cavity of a first mold part (Figure 1). Then a molding core of a second mold part is pressed against the central portion of the thermoplastic film followed by the closure of the remaining parts of the second mold around the first pressed core. The periphery of the first mold includes a recess that corresponds with a cutting blade positioned on the second mold so that the

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thermoplastic film is trimmed upon the closing of the mold. King et al. also teaches for the injection of polymer into the mould cavity once the excess film is trimmed (abstract).

It is clear that from the teachings of Dunbar, Keen et al., and King et al. that the use of multiple pushers is well known in the art in the production compacted thermoformed inserts in order to properly control the shaping of a drapable material. It would have been obvious to one having ordinary skill in the art at the time of invention to use multiple pushers (a male mold of multiple pushers) in order to control the thermoforming and compacting process of the laminated sheet of Momotome.

With regard to claims 9, 10, 12, 29-31, and 32, Momotome does not specifically teach a shaped article with a setback. Dunbar and Keen et al., however, teach thermoformed articles with setbacks. It is clear from the teachings of Dunbar that various shaped, multilayered articles are well known in the art. It would have been obvious to one having ordinary skill in the art at the time of invention to use the process of Momotome to produce every type of multilayered articles, including the articles as taught by Dunbar. Further, Dunbar and Keen et al. both teach pushers that correspond with a set back formed in the finished product, and it would have been further obvious to one having ordinary skill in the art to provide a pusher to ensure that the laminated sheet properly forms into the setback portion of the mold.

With regard to claim 14, Momotome does not specifically teach the use of the apparatus for the formation of automobile parts. Dunbar, however, teaches the use of a similar apparatus to produce an automobile part. It would have been obvious to one having

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ordinary skill in the art at the time of invention to use the apparatus of Momotome to produce all types of multilayer articles including car parts.

Response to Arguments

9. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

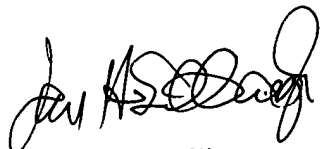
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 3,337,664 (Lyon) is cited as art of interest to show the current state of the art at the time of invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey P. Shipsides whose telephone number is 703-306-0311. The examiner can normally be reached on Monday - Friday 9 AM till 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jan H Silbaugh can be reached on 703-308-3829. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Geoffrey P. Shipsides/gps
December 23, 2002


JAN H. SILBAUGH
SUPERVISORY PATENT EXAMINER
ART UNIT 1732
12/24/02